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EXAMINER	
LY, NGHI H	

ART UNIT	PAPER NUMBER
2686	

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/733,235	FORMAN ET AL.	
	Examiner	Art Unit	
	Nghi H. Ly	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 June 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 9.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings (fig.1 and fig.2) are objected to under 37 CFR 1.83(a) because they fail to show *"off-board transceiver 16", "an antenna 24", "transceiver 22", "interface unit 26"* as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 7, 8, 10-12, 14, 16, 18, 20-31, 33, 37, 38, 40-42, 45-47, 49, 50, 53-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Lemelson et al (US 6,084,510).

Regarding claims 1, 21 and 41, Lemelson teaches a system that integrates commercial satellite communications technology with tactical aircraft (see column 16,

lines 34-37) communications technology (see fig.1, wireless communication between surveillance aircraft 10 and satellite 8), comprising: an off-board transceiver capable of communicating two-way data with a SATCOM network (fig.1, see links 22b, 22e), an onboard transceiver capable of communicating two-way data with SATCOM network (fig.1, see links 22, 22a), an onboard communications system (see fig.1, satellite 8), and an onboard interface unit further comprising a computer processor that executes a software program (see fig.1, wireless communication between satellite 8 and other systems, the teaching of Lemelson inherently teaches an onboard interface unit further comprising a computer processor that executes a software program) comprising instructions for: sending and receiving data from onboard commercial transceiver (fig.1, see links 22, 24), and sending and receiving data from onboard communications system and wherein said onboard interface unit communicates data with said onboard communications system (fig.1, see links 22, 22d) and said onboard commercial transceiver (see fig.1, wireless connection between surveillance aircraft 10, surveillance satellite 8, pager satellite 4 and ground bases 12, 14, warning device 11 and control center 16).

Regarding claims 2 and 38, Lemelson further teaches the onboard transceiver is a commercial off-the-shelf transceiver (see fig.1, satellite 8).

Regarding claims 3 and 31, Lemelson further teaches the communications system further comprises an intercom and the onboard interface unit further comprises a sound-card coupled to said computer processor and said intercom (see column 5, lines 11-19), the sound card being capable of: communicating two-way data with said

computer processor and communicating two-way analog voice data with said intercom (see column 9, lines 15-31, the teaching of Lemelson inherently teaches a sound-card coupled to said computer processor and said intercom).

Regarding claims 4, 42 and 46, Lemelson further teaches the onboard interface unit comprises a video card coupled to said processor and said display (see column 8, lines 48-57 and see column 9, lines 15-31), wherein said video card is capable of: sending and receiving data from the computer process, sending and receiving data from the display (also see column 8, lines 48-57 and see column 9, lines 15-31, the teaching of Lemelson inherently teaches a video card coupled to the processor).

Regarding claims 7 and 45, Lemelson further teaches the display is a multi-function display set (see fig.10, 162 and see column 16, lines 1-7).

Regarding claims 8, 10-12, 14, 49, 50 and 53, Lemelson further teaches the communications system further comprises a radio in electrical connection with the computer processor, the computer processor capable communicating two-way data with the radio (see column 13, lines 27-35).

Regarding claims 16, 18, 33, 40 and 47, Lemelson teaches the weather (see column 3, lines 29-37) data and voice data (see column 5, lines 11-18) is communicated.

Regarding claim 20, Lemelson further teaches a commercial SATCOM control capable of sending to and receiving control information from the onboard commercial transceiver and capable of sending to and receiving control data from the computer processor (see column 5, lines 54-60).

Regarding claim 22, Lemelson further teaches the step of communicating data to the onboard interface unit further comprises communicating the data to a computer processor (see column 15, lines 30-39).

Regarding claims 23 and 24, Lemelson further teaches the step of communicating two-way data with the onboard communications system further comprises communicating video data to a multi-function display set (see column 8, lines 48-57).

Regarding claim 25, Lemelson further teaches the step of communicating two-way data with the onboard communications system further comprises communicating two-way data with a mission data processor (see column 15, lines 30-39).

Regarding claims 26, 27 and 37, Lemelson further teaches the step of communicating two way data with the onboard communications systems further comprises communicating voice analog data with an intercom (see column 5, lines 11-18).

Regarding claims 28 and 29, Lemelson further teaches the step of communicating two-way data with a commercial SATCOM network from an off-board transceiver further comprises communicating data from a mobile air unit (fig.1, see wireless communication between command control center 2 and mobile surveillance 12 or device 11).

Regarding claim 30, Lemelson further teaches the step of communicating two-way data with a commercial SATCOM network from an off-board transceiver further

comprises communicating data from a stationary ground command (fig.1, see wireless communication between command control center 2 and other devices).

Regarding claim 54, Lemelson further teaches the navigation system is a GPS system (see abstract and see column 9, lines 34-58).

Regarding claim 55, Lemelson further teaches comprising a storage device in electrical communication with the computer processor, the computer processor capable of communicating two-way data with the storage device (see column 15, lines 57-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 5, 6, 9, 13, 15, 17, 19, 32, 34, 39, 43, 44, 48, 56 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemelson et al (US 6,084,510) in view of admitted prior art.

Regarding claims 5, 6, 43 and 44, Lemelson teaches the system of claims 4 and 42. Lemelson does not specifically disclose the video card is capable of communicating SVGA data or RS-170 data. Applicant admitted in the instant specification (see 7, lines 29-30, page 11 line 32 to page 12 line 2 and page 10, line 33 to page 11, line 1) that the use of SVGA data or RS-170 data is very well known in the art and it would have been obvious to one of ordinary skill in the art to provide a video card is capable of communicating SVGA data or RS-170 data for the benefit of transmitting and displaying information using commercially available standards.

Regarding claims 9, 13 and 48, Lemelson teaches the system as claimed. Lemelson does not specifically disclose the radio is a UHF/VHF radio or the bus is a Mil-Std-1553 bus. Applicant admitted in the instant specification (see 7, lines 29-30 and see page 12, lines 3-6) that the use of UHF/VHF radio or Mil-Std-1553 bus is very well known in the art and it would have been obvious to one of the ordinary skill in the art to provide UHF/VHF radio or Mil-Std-1553 bus for the benefit of two-way voice data and mission data communications using commercially satellite network.

Regarding claims 15, 17, 19, 32, 34 and 39, Lemelson teaches the weather (see column 3, lines 29-37) data or voice data (see column 5, lines 11-18) is communicated. Lemelson does not specifically disclose the using threat or target data is communicated. Applicant admitted in the instant specification (see page 13, lines 6-8 and see column

13 lines 19-21) that the use of threat or target data is very well known in the art and it would have been obvious to one of the ordinary skill in the art to provide threat data or target data for the benefit of monitoring threat or target during combat in military operations.

Regarding claim 56, Lemelson teaches the apparatus of integrating commercial satellite communication technology with military aircraft communications technology (see column 11, lines 19-24 and column 16, lines 32-37). Lemelson does not specifically disclose the storage device is a flash hard drive. Applicant admitted in the instant specification (see page 11, lines 25-28) that the use of a flash hard drive is very well known in the art and it would have been obvious to one of the ordinary skill in the art to modify the above teaching of Lemelson as claimed, in order to provide a method for storing data.

Regarding claim 57, Lemelson teaches the apparatus of integrating commercial satellite communication technology with military aircraft communications technology as claimed. Lemelson does not specifically disclose a voltage converter in electrical connection with computer processor and the voltage converter capable of providing electrical power to the computer processor. Applicant admitted in the instant specification (see page 12, lines 12-13) that the use of voltage converter capable of providing electrical power to the computer processor is very well known in the art and it would have been obvious to one of ordinary skill in the art to provide a voltage converter in electrical connection with computer processor and capable of providing electrical

power to the computer processor for the benefit of providing electrical power to the computer processor in the system of Lemelson.

7. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lemelson et al (US 6,084,510) in view of Hart (US 5,410,739).

Regarding claim 35, Lemelson teaches the step of communicating two-way data with a commercial SATCOM network from an onboard commercial transceiver (see Lemelson, fig.1). Lemelson does not specifically disclose communicating status data.

Hart teaches communicating status data (see column 1,line 60 to column 2, line 5 and see column 3, lines 43-56).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Hart into the system of Lemelson in order to know a variable physiological status of the pilot (see Hart, column 1, lines 63-64).

8. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lemelson et al (US 6,084,510) in view of Vian (US 6,114,976).

Regarding claim 36, Lemelson teaches the step of communicating two-way data with a commercial SATCOM network from an onboard commercial transceiver (see Lemelson, fig.1). Lemelson does not specifically disclose communicating ejection data.

Vian teaches communicating ejection data (see column 2, lines 46-65).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Vian into the system of Lemelson in order to determine whether or not for the given set of aircraft conditions, an ejection is appropriate (see Vian, column 2, lines 56-58).

9. Claims 51, 52, 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemelson et al (US 6,084,510) in view of Frazier, Jr. et al (US 6,271,768).

Regarding claim 51, Lemelson teaches a bus in electrical connection with the computer processor (see column 17, lines 55-61).

Lemelson does not specifically disclose the computer processor communicates with the mission data processor.

Frazier teaches the computer processor communicates with the mission data processor (see column 8, lines 14-25 and see column 10, lines 5-20).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Frazier into the system of Lemelson in order to track a specific formation aircraft (see Frazier, column 10, lines 10-20).

Regarding claim 52, see claim 13 for the teaching of Lemelson and applicant's admitted prior art.

Regarding claim 58, the combination of Lemelson and Frazier teaches claim 51. The combination of Lemelson and Frazier does not specifically disclose a test port in

electrical connection with the computer processor. The concept of a test port in electrical connection with the computer processor is very well known in the art and examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art to provide a test port in electrical connection with the computer processor for the benefit of testing communication equipment in the system of Lemelson and Frazier.

Regarding claim 59, the combination of Lemelson and Frazier teaches the apparatus of integrating commercial satellite communication technology with military aircraft communications technology (see column 11, lines 19-24 and column 16, lines 32-37) instead of the test port is a RS-232 port as claimed. However, using the test port is a RS-232 port is known in the art. Therefore, it would have been obvious to one of the ordinary skill in the art to modify the above teaching of Lemelson and Frazier as claimed, in order to improve the test port.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Leuca (US 6,201,797) teaches high bandwidth delivery and internet access airborne passenger.

b. Taylor (US 6,643,510) teaches mobile and platform real time availability and content scheduling system and method.

c. Sternowski (US 6,697,008) teaches distributed electronic warfare system.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (703) 605-5164. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

03/20/04

3/22/04
LESTER G. KINCAID
PRIMARY EXAMINER